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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,234	09/29/2000	Ryuji Nishikawa	YKI-0056	9974

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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/676,234

Applicant(s)

NISHIKAWA, RYUJI

Examiner

Kimnhung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This application has been examined. The claims 1-22 are pending. The examination results are as following.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Yamada (US patent 6,246,179)

Yamada discloses in figures 3-4B, an EL display device having a plurality pixels (110 figure 3) comprising an EL element (60) having an emissive layer (66) between first and second electrodes (see anode 61 and cathode 67), and a thin film transistor (TFT 30) having first and second conductive regions (see substrate 10 may be a semiconductor, see column 5, lines 6-10 and lines 24-28), and see TFT 30 serves as the active layer 33, and formed of a-Si film and p-Si film, see column 5, lines 37-44), one of said first and second conductive regions being connected to the EL element (see column 5, lines 12-15), wherein an interface between a channel (33c) of said thin film transistor(30 or 40) and said one of conductive regions connected to said EL element is spaced apart from said emissive layer (see column 5, lines 24-59).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada (US patent 6,246,179) in view of Yamauchi et al. (US patent 6,512,504).

Yamada discloses an EL display device having a plurality of display pixels (see figure 3) comprising an EL element (60) having an emissive layer (66) between first and second electrodes (see anode 61 and cathode 67); a first thin film transistor (TFT 30) having a first conductive region formed of a semiconductor film (see substrate 10 may be a semiconductor substrate, see column 5, lines 6-10 and lines 24-28) and connect to data line, and a gate electrode should be connected to a gate line, and a second conductive region (see TFT 30 serves as the active layer 33, and a-Si film and p-Si film, see column 5, lines 37-44), and a second thin film transistor (TFT40) having a third conductive region formed of a semiconductor film (because both of TFTs 30 and 40 arranged over the active layers, see column 5, lines 28-36) and connected to a power source line of EL element is connected to a power lines source line (see column 5, lines 12-15),

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connected to a power source lines of the organic EL element (60, see column 5, lines 11-36). However, Yamada does not disclose a fourth conductive region connected to the EL element. Yamauchi et al. disclose in figures 1, 7 and 11, a TFT (201) having conductive region (see active layer is constituted by semiconductive film and connected to EL element (see column 3, lines 22- 37, see abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of using the conductive region (fourth conductive region) and connected to EL element as taught by Yamauchi et al. into the EL device having first and second TFT of Yamada because this would be formed in a pixel such that to provide a structure which is primarily intended for the reduction of an off-current (see abstract).

5. Claims 3-4, and 6-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada (US patent 6,246,179) in view of Hamada (US patent 6,114,715).

Regarding claims 3-4 and 6-14, Yamada discloses an EL display having a plurality of display pixels comprising n EL element having an emissive layer between first and second electrodes, and thin film transistor having first and second conductive regions formed of a semiconductor film as discussed above. However, Yamada does not disclose a light shield film for shielding light emitted from said EL element is provided between said EL element and an interface between said one of conductive regions connected to said EL element and a channel of said thin film transistor; and the first or second electrode of thin film transistor also function as said light shielding film, or the light shielding film is electrically connected to the power source. Hamada discloses a light shield film for shielding light emitted from EL (see abstract); and the electrode also

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function as light shield film (see a plurality of second electrode arranged and parallel to one another and intersecting the first electrodes, over the light emitting element layer with electroluminescent elements formed at individual intersections of the first electrodes and second electrodes, see column 3, lines 59-67 and column 4, lines 1-6), and an inherent light shield film is electrically connected to the power source. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of using light shield film for light emitted from EL, or the electrodes over the light emitting element with electroluminescent elements layer formed as taught by Hamada into an EL display having a plurality of display pixels comprising an EL element having an emissive layer between first and second electrodes, and thin film transistor having first and second conductive regions formed of a semiconductor film as discussed above because this would be made a highly reflective multiplayer film which suppressed optical crosstalk caused by light scattering originated in the EL element (see abstract).

Regarding claims 15-22, Yamada discloses an EL display device having a plurality of display pixels (see figure 3) comprising an EL element (60) having an emissive layer (66) between first and second electrodes (see anode 61 and cathode 67); a first thin film transistor (TFT 30) having a first conductive region formed of a semiconductor film (see substrate 10 may be a semiconductor substrate, see column 5, lines 6-10 and lines 24-28) and connect to data line, and a gate electrode should be connected to a gate line, and a second conductive region (see TFT 30 serves as the active layer 33, and a-Si film and p-Si film, see column 5, lines 37-44), and a second thin film transistor (40) having a third

conductive region. Furthermore, Hamada discloses an inherent light shield having an opening for a portion of said EL element corresponding to a pixel is provided in a layer underlying said thin film transistor. However, Yamada and Hamada do not disclose the opening of the light shielding film is located inner than an outer edge of an emissive region of the EL element.

From the claims 18 and 22, it would have been obvious for Yamada and Hamada's display to have the opening of the light shielding film is located inner than an outer edge of an emissive region of the EL element as claimed since such a modification would have involved a mere change in the location of a device. Change in location is generally recognized as being within the level of ordinary skill in the art, absent unexpected results.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada (US patent 6,246,179) and Hamada (US patent 6,114,715) as applied to claim 3 above, and further in view of Yanagisawa (US patent 4,759,610).

Yamada discloses an EL display having a plurality of display pixels comprising an EL element having an emissive layer between first and second electrodes, and thin film transistor having first and second conductive regions formed of a semiconductor.

Furthermore, Hamada discloses the light shielding film is in the transparent on which TFT formed (see column 6, lines 56-63). However, Yamada and Hamada do not disclose a second light shielding film is further provided between a transparent substrate on which the thin film transistor is formed. Yanagisawa discloses an active matrix of liquid crystal or EL display having a light shielding layer (28, second light shielding film) formed on

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the transparent substrate (16), the light shielding layer is made of metal film and is formed on TFT (see figure 6-7, column 3, lines 40-52, and column 4, lines 66-68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of using the light shielding film and formed on the TFT as taught by Yanagisawa into the EL element of Yamada and Hamada's display because this would for fixing at a predetermined potential is provided on each of thin film transistor portions of the first electrode substrate and so as forming a supplemental storage capacitor (see abstract).

Response to Arguments

7. Applicant's arguments filed on 4-21-03 have been fully considered but they are not persuasive in view of the new ground(s) of rejection.
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231


Or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimnhung Nguyen
November 14, 2003


RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600